1   1.   A method for detecting a *Helicobacter pylori* infection, the method comprising
2   the steps of:

3   determining an integrity of a *Helicobacter pylori* nucleic acid present in
4   a patient sample; and

5   identifying the patient as having a current *Helicobacter pylori* infection
6   if the integrity of the nucleic acid exceeds a predetermined threshold.

1   2.   The method of claim 1, wherein the identifying step comprises:

2   comparing the integrity of the *Helicobacter pylori* nucleic acid to an
3   integrity of a non-*Helicobacter pylori* nucleic acid.

1   3.   The method of claim 2, wherein the non-*Helicobacter pylori* nucleic acid is a
2   patient nucleic acid.

1   4.   The method of claim 2, wherein the non-*Helicobacter pylori* nucleic acid is an
2   *Escherichia coli* nucleic acid.

1   5.   The method of claim 1, wherein the patient sample is selected from the group
2   consisting of stool, sputum, pancreatic fluid, bile, lymph, blood, urine, saliva, gastric
3   juice, and vomitus.

1   6.   The method of claim 5, wherein the patient sample is stool.

1   7.   The method of claim 5, wherein the patient sample is saliva.

1   8.   The method of claim 5, wherein the *Helicobacter pylori* nucleic acid is a DNA.

1   9.   The method of claim 1, comprising the further step of adding an ion chelator
2   to the patient sample such that the concentration of the ion chelator is at least 150
3   mM, thereby to preserve the integrity of the *Helicobacter pylori* nucleic acid.

1   10.   A method for grading a *Helicobacter pylori* infection in a patient, the method
2   comprising the steps of:

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3   determining an amount of high-integrity *Helicobacter pylori* nucleic acid

4   present in a patient sample;

5   comparing said amount with at least two standards comprising high-

6   integrity *Helicobacter pylori* nucleic acid, each standard being indicative of a

7   different grade of *Helicobacter pylori* infection; and

8   grading a *Helicobacter pylori* infection based on said comparing step.

1   11.   A method for grading a *Helicobacter pylori* infection in a patient, the method

2   comprising the steps of:

3   detecting a high-integrity *Helicobacter pylori* nucleic acid and a non-

4   *Helicobacter pylori* nucleic acid in a patient sample;

5   determining an amount of the high-integrity *Helicobacter pylori* nucleic

6   acid relative to the non-*Helicobacter pylori* nucleic acid in the patient sample;

7   comparing said amount with at least two standards of high-integrity

8   *Helicobacter pylori* nucleic acid relative to non-*Helicobacter pylori* nucleic

9   acid, each standard being indicative of a particular grade of a *Helicobacter*

10   *pylori* infection; and

11   grading a *Helicobacter pylori* infection based on said comparing step.

1   12.   A method for monitoring progression of a *Helicobacter pylori* infection in a

2   patient, the method comprising the steps of:

3   determining a first amount of a *Helicobacter pylori* nucleic acid in a first

4   sample obtained from a patient;

5   determining a second amount of a *Helicobacter pylori* nucleic acid in a

6   second sample obtained from the patient;

7   comparing the first amount with the second amount; and

8   classifying the infection as diminishing if the second amount is less

9   than the first amount.

1   13.   The method of claim 12, wherein the second sample is obtained no more than
2   thirty days after the first sample.

1   14.   A method for evaluating a course of treatment for a *Helicobacter pylori*
2   infection, the method comprising the steps of:

3   obtaining a sample from a patient during a course of treatment or no
4   more than thirty days after the course of treatment;

5   amplifying a high-integrity *Helicobacter pylori* nucleic acid present in
6   the sample; and

7   identifying the patient as having a current *Helicobacter pylori* infection
8   if the high-integrity *Helicobacter pylori* nucleic acid is present in the sample.

1   15.   A method for evaluating the efficacy of a proposed treatment regimen for a
2   *Helicobacter pylori* infection, the method comprising the steps of:

3   obtaining, from test patients diagnosed with an *Helicobacter pylori*
4   infection, a test set of samples during the course of a proposed treatment
5   regimen or no more than thirty days after the course of the proposed
6   treatment regimen;

7   obtaining, from control patients diagnosed with an *Helicobacter pylori*
8   infection, a control set of samples during the course of a control treatment
9   regimen or no more than thirty days after the course of the control treatment
10 regimen;

11   amplifying a high-integrity *Helicobacter pylori* nucleic acid present in
12 the samples; and

13   comparing the amount of high-integrity *Helicobacter pylori* nucleic acid
14 present in the test set of samples to the amount of high-integrity *Helicobacter*
15 *pylori* nucleic acid present in the control set of samples.

1   16.   A method for diagnosing a gastric disease in a patient, the method comprising
2   the steps of:

3   detecting a high-integrity *Helicobacter pylori* nucleic acid in a patient

4   sample; and

5   identifying the patient as having a gastric disease caused by a

6 *Helicobacter pylori* infection if the high-integrity *Helicobacter pylori* nucleic

7 acid is present in the sample.

1   17.   A method for detecting a *Helicobacter pylori* infection in a patient, the method

2 comprising the steps of:

3   amplifying, from a patient sample,

4   a first *Helicobacter pylori* nucleic acid at least 200 nucleotides in

5   length,

6   a second *Helicobacter pylori* nucleic acid at least 400

7 nucleotides in length, and

8   a third *Helicobacter pylori* nucleic acid at least 600 nucleotides

9 in length;

10   detecting the amplified first, second, and third *Helicobacter pylori*

11 nucleic acids; and

12   identifying the patient as having a *Helicobacter pylori* infection if the

13 amplified first, second, and third *Helicobacter pylori* nucleic acids are

14 detected.

1   18.   A method for detecting a *Helicobacter pylori* infection in a patient, the method

2 comprising the steps of:

3   determining the integrity of patient nucleic acids in a patient sample

4 comprising shed cells or cellular debris; and

5   identifying the patient as having disease if the integrity of the patient

6 nucleic acids exceeds a predetermined threshold.

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